

Product datasheet for TP526161

DII1 (NM_007865) Mouse Recombinant Protein

Product data:

Product Type: Recombinant Proteins

Description: Purified recombinant protein of Mouse delta like canonical Notch ligand 1 (DII1), with C-terminal MYC/DDK tag, expressed in HEK293T cells, 20ug

Species: Mouse

Expression Host: HEK293T

Expression cDNA Clone or AA Sequence: >MR226161 representing NM_007865

Red=Cloning site Green=Tags(s)

MGRRSALALAVSALLCQVWSSGVFELKLQEFVNKKGLLGNRNCCRGSGPPCACRTFFRVCLKHYQASV
SPEPPCTYGSVAVTPVLGVDSFSLPDGAGIDPAFSNPIRFPFGFTWPGTFSLIIEALHTDSPDDLATENPE
RLISRLTTQRHLTVGEEWSQDLHSSGRDRLYSYRFVCDHEYHGGCSVFCRPRDDAFGHFTCGDRGEKM
CDPGWKGQYCTDPICLPGCDDQHGYCDKPGECKCRVWQGRYCDCEIRYPGLHGTCQQPWQCNCQEGWG
GLFCNQDLNYCTHHKPCRNGATCTNTGQGSYTCSCRPGYTGANCELEVDECAPSPCKNGASCTDLEDSFS
CTCPPGFYGVKVELSAMTCADGPCFNGGRCSNDPDGGYTCHCPLGFSGFNCEKMDLCGSSPCSNGAKCV
DLGNSYLCRCQAGFSGRYCEDNVDDCASSPCANGGTCRDSVNDFSCTCPPGYTGKNCASPVSRCEHAPCH
NGATCHQRGQRYMCECAQGYGGPNCQFLLPEPPPMPVVDLSERHMESQGGPPWVAVCAGVVLVLLLLL
GCAAVVVCVRLKLQKHQPPPEPCGGGETETMNNLANCQREKDVSVSIIGATQIKNTNKKADFHGDHGAEKS
SFKVRYPTVDYNLVRDLKGDVTRDTHSKRDTKCQSQSSAGEEKIAPTTLRGGEIPDRKRPEVSVYSTSKD
TKYQSVVLSAEKDECVIATEV

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Tag: C-MYC/DDK

Predicted MW: 78.9 kDa

Concentration: >0.05 µg/µL as determined by microplate BCA method

Purity: > 80% as determined by SDS-PAGE and Coomassie blue staining

Buffer: 25 mM Tris-HCl, 100 mM glycine, pH 7.3, 10% glycerol

Note: For testing in cell culture applications, please filter before use. Note that you may experience some loss of protein during the filtration process.

Storage: Store at -80°C after receiving vials.



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Stability:	Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles.
RefSeq:	NP_031891
Locus ID:	13388
UniProt ID:	Q61483
RefSeq Size:	3444
Cytogenetics:	17 8.95 cM
RefSeq ORF:	2166
Synonyms:	Delta1
Summary:	<p>Transmembrane ligand protein of NOTCH1, NOTCH2 and NOTCH3 receptors that binds the extracellular domain (ECD) of Notch receptor in a cis and trans fashion manner (PubMed:21985982, PubMed:10958687). Following transinteraction, ligand cells produce mechanical force that depends of a clathrin-mediated endocytosis, requiring ligand ubiquitination, EPN1 interaction, and actin polymerisation; these events promote Notch receptor extracellular domain (NECD) transendocytosis and triggers Notch signaling through induction of cleavage, hyperphosphorylation, and nuclear accumulation of the intracellular domain of Notch receptors (NICD) (PubMed:10958687, PubMed:18676613). Is required for embryonic development and maintenance of adult stem cells in many different tissues and immune systems; the DLL1-induced Notch signaling is mediated through an intercellular communication that regulates cell lineage, cell specification, cell patterning and morphogenesis through effects on differentiation and proliferation (PubMed:17194759, PubMed:19562077, PubMed:18997111, PubMed:23695674, PubMed:16495313, PubMed:21238454, PubMed:22282195, PubMed:7671806, PubMed:17960184, PubMed:22529374, PubMed:19389377, PubMed:23699523, PubMed:19144989, PubMed:23688253, PubMed:23806616, PubMed:26114479, PubMed:22940113, PubMed:25220152, PubMed:20081190, PubMed:21572390, PubMed:22096075). Plays a role in brain development at different level, namely by regulating neuronal differentiation of neural precursor cells via cell-cell interaction, most likely through the lateral inhibitory system in an endogenous level dependent-manner (PubMed:7671806, PubMed:18997111). During neocortex development, DII1-Notch signaling transmission is mediated by dynamic interactions between intermediate neurogenic progenitors and radial glia; the cell-cell interactions are mediated via dynamic and transient elongation processes, likely to reactivate/maintain Notch activity in neighboring progenitors, and coordinate progenitor cell division and differentiation across radial and zonal boundaries (PubMed:23699523). During cerebellar development, regulates Bergmann glial monolayer formation and its morphological maturation through a Notch signaling pathway (PubMed:23688253). At the retina and spinal cord level, regulates neurogenesis by preventing the premature differentiation of neural progenitors and also by maintaining progenitors in spinal cord through Notch signaling pathway (PubMed:19389377, PubMed:26114479). Also controls neurogenesis of the neural tube in a progenitor domain-specific fashion along the dorsoventral axis (PubMed:20081190). Maintains quiescence of neural stem cells and plays a role as a fate determinant that segregates asymmetrically to one daughter cell during neural stem cells mitosis, resulting in neuronal</p>

differentiation in DII1-inheriting cell (PubMed:23695674). Plays a role in immune system development, namely the development of all T-cells and marginal zone (MZ) B cells (PubMed:15146182, PubMed:19217325). Blocks the differentiation of progenitor cells into the B-cell lineage while promoting the emergence of a population of cells with the characteristics of a T-cell/NK-cell precursor (By similarity). Upon MMP14 cleavage, negatively regulates Notch signaling in haematopoietic progenitor cells to specifically maintain normal B-cell development in bone marrow (PubMed:21572390). Also plays a role during muscle development. During early development, inhibits myoblasts differentiation from the medial dermomyotomal lip and later regulates progenitor cell differentiation (PubMed:17194759). Directly modulates cell adhesion and basal lamina formation in satellite cells through Notch signaling. Maintains myogenic progenitors pool by suppressing differentiation through down-regulation of MYOD1 and is required for satellite cell homing and PAX7 expression (PubMed:22940113). During craniofacial and trunk myogenesis suppresses differentiation of cranial mesoderm-derived and somite-derived muscle via MYOD1 regulation but in cranial mes